

SEQUENCE LISTING

<110> Sundelin, Johan
Scarborough, Robert M.

<120> Recombinant C140 Receptor, Its Agonists and Antagonists, and
Nucleic Acids Encoding the Receptor

<130> 44481-5006-09-US

<140> US 10/127,691
<141> 2002-04-23

<150> US 08/097,938
<151> 1993-07-26

<150> US 08/390,301
<151> 1995-01-25

<150> US 08/474,414
<151> 1995-06-07

<160> 63

<170> PatentIn Ver. 2.1

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<223> C140 receptor, genomic DNA and deduced protein
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acacaagaat tagacttcaa ccgtcaccaa ctgccctgtg taggacggtc ggtcactgaa 180
agagaatatt gtctgcaata ctctaatgac atctgtctgt gttcatctga a atg ttc 237
Met Phe
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cat tta aaa cac agc agc ctt act gtt gga cca ttt atc tca gta atg 285
His Leu Lys His Ser Ser Leu Thr Val Gly Pro Phe Ile Ser Val Met
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Ile Leu Leu Arg Phe Leu Cys Thr Gly [Arg Asn Asn Ser Lys Gly Arg]
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Ser Leu Ile Gly Arg Leu Glu Thr Gln Pro Pro Ile Thr Gly Lys Gly
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gcc tac gtg ctc atg atc aag acg ctc cgc tct tct gct atg gat gaa Ala Tyr Val Leu Met Ile Lys Thr Leu Arg Ser Ser Ala Met Asp Glu 260 265 270	1053
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gtg cat tat ttc cta atc aaa acc cag agg cag agc cac gtc tac gcc Val His Tyr Phe Leu Ile Lys Thr Gln Arg Gln Ser His Val Tyr Ala 310	315	320		1197
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Lys Gly Val Pro Val Glu Pro Gly Phe Ser Ile Asp Glu Phe Ser Ala				
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Ser Ile Leu Thr Gly Lys Leu Thr Thr Val Phe Leu Pro Val Val Tyr				
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Ile Ile Val Phe Val Ile Gly Leu Pro Ser Asn Gly Met Ala Leu Trp				
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Ile Phe Leu Phe Arg Thr Lys Lys His Pro Ala Val Ile Tyr Met				
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 Lys Ile Ser Tyr His Leu His Gly Asn Asn Trp Val Tyr Gly Glu Ala
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 Leu Cys Lys Val Leu Ile Gly Phe Phe Tyr Gly Asn Met Tyr Cys Ser
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 Ile Leu Phe Met Thr Cys Leu Ser Val Gln Arg Tyr Trp Val Ile Val
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 Asn Pro Met Gly His Pro Arg Lys Lys Ala Asn Ile Ala Val Gly Val
 180 185 190
 Ser Leu Ala Ile Trp Leu Leu Ile Phe Leu Val Thr Ile Pro Leu Tyr
 195 200 205
 Val Met Lys Gln Thr Ile Tyr Ile Pro Ala Leu Asn Ile Thr Thr Cys
 210 215 220
 His Asp Val Leu Pro Glu Glu Val Leu Val Gly Asp Met Phe Asn Tyr
 225 230 235 240
 Phe Leu Ser Leu Ala Ile Gly Val Phe Leu Phe Pro Ala Leu Leu Thr
 245 250 255
 Ala Ser Ala Tyr Val Leu Met Ile Lys Thr Leu Arg Ser Ser Ala Met
 260 265 270
 Asp Glu His Ser Glu Lys Lys Arg Gln Arg Ala Ile Arg Leu Ile Ile
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 Thr Val Leu Ala Met Tyr Phe Ile Cys Phe Ala Pro Ser Asn Leu Leu
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 Leu Val Val His Tyr Phe Leu Ile Lys Thr Gln Arg Gln Ser His Val
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 Tyr Ala Leu Tyr Leu Val Ala Leu Cys Leu Ser Thr Leu Asn Ser Cys
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 Ile Asp Pro Phe Val Tyr Tyr Phe Val Ser Lys Asp Phe Arg Asp His
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 Ala Arg Asn Ala Leu Leu Cys Arg Ser Val Arg Thr Val Asn Arg Met
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Glu	Ala	Leu	Cys	Asn	Val	Leu	Ile	Gly	Phe	Phe	Tyr	Gly	Asn	Met	Tyr		
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Gly	Ile	Ser	Leu	Ala	Ile	Trp	Leu	Leu	Ile	Leu	Leu	Val	Thr	Ile	Pro	
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Leu	Tyr	Val	Val	Lys	Gln	Thr	Ile	Phe	Ile	Pro	Ala	Leu	Asn	Ile	Thr	
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His	Val	Tyr	Ala	Leu	Tyr	Ile	Val	Ala	Leu	Cys	Leu	Ser	Thr	Leu	Asn	
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Asp	His	Ala	Lys	Asn	Ala	Leu	Leu	Cys	Arg	Ser	Val	Arg	Thr	Val	Lys	
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Gln	Met	Gln	Val	Ser	Leu	Thr	Ser	Lys	Lys	His	Ser	Arg	Lys	Ser	Ser	
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Leu	Cys	Lys	Val	Leu	Ile	Gly	Phe	Phe	Tyr	Gly	Asn	Met	Tyr	Cys	Ser
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Asn Pro Met Gly His Pro Arg Lys Lys Ala Asn Ile Ala Val Gly Val
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Val Met Lys Gln Thr Ile Tyr Ile Pro Ala Leu Asn Ile Thr Thr Cys
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His Asp Val Leu Pro Glu Glu Val Leu Val Gly Asp Met Phe Asn Tyr
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245 250 255

Ala Ser Ala Tyr Val Leu Met Ile Lys Thr Leu Arg Ser Ser Ala Met
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Asp Glu His Ser Glu Lys Lys Arg Gln Arg Ala Ile Arg Leu Ile Ile
275 280 285

Thr Val Leu Ala Met Tyr Phe Ile Cys Phe Ala Pro Ser Asn Leu Leu
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Leu Val Val His Tyr Phe Leu Ile Lys Thr Gln Arg Gln Ser His Val
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Tyr Ala Leu Tyr Leu Val Ala Leu Cys Leu Ser Thr Leu Asn Ser Cys
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Ile Asp Pro Phe Val Tyr Tyr Phe Val Ser Lys Asp Phe Arg Asp His
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Ala Arg Asn Ala Leu Leu Cys Arg Ser Val Arg Thr Val Asn Arg Met
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Val Thr Gly Lys Gly Val Ile Val Glu Ile Val Phe Ser Val Asp Glu
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Phe Ser Ala Ser Val Leu Thr Gly Lys Leu Thr Thr Val Phe Leu Pro
 65 70 75 80

Ile Val Tyr Ile Ile Val Phe Val Val Gly Leu Pro Ser Asn Gly Met
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Ala Leu Trp Val Phe Leu Phe Arg Thr Lys Lys Lys His Pro Ala Val
 100 105 110

Ile Tyr Met Ala Asn Leu Ala Asp Leu Leu Ser Val Ile Trp
 115 120 125

Phe Pro Leu Lys Ile Ala Tyr His Ile His Gly Asn Asn Trp Ile Tyr
 130 135 140

Gly Glu Ala Leu Cys Asn Val Leu Ile Gly Phe Phe Tyr Gly Asn Met
 145 150 155 160

Tyr Cys Ser Ile Leu Phe Met Thr Cys Leu Ser Val Gln Arg Tyr Trp
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Val Ile Val Asn Pro Met Gly His Ser Arg Lys Lys Ala Asn Ile Ala
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Ile Gly Ile Ser Leu Ala Ile Trp Leu Leu Ile Leu Val Thr Ile
 195 200 205

Pro Leu Tyr Val Val Lys Gln Thr Ile Phe Ile Pro Ala Leu Asn Ile
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Thr Thr Cys His Asp Val Leu Pro Glu Gln Leu Leu Val Gly Asp Met
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Phe Asn Tyr Phe Leu Ser Leu Ala Ile Gly Val Phe Leu Phe Pro Ala
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Phe Leu Thr Ala Ser Ala Tyr Val Leu Met Ile Arg Met Leu Arg Ser
 260 265 270

Ser Ala Met Asp Glu Asn Ser Glu Lys Lys Arg Lys Arg Ala Ile Lys
 275 280 285

Leu Ile Val Thr Val Leu Ala Met Tyr Leu Ile Cys Phe Ile Pro Ser
 290 295 300

Asn Leu Leu Leu Val Val His Tyr Phe Leu Ile Lys Ser Gln Gly Gln
 305 310 315 320

Ser His Val Tyr Ala Leu Tyr Ile Val Ala Leu Cys Leu Ser Thr Leu
 325 330 335

Asn Ser Cys Ile Asp Pro Phe Val Tyr Tyr Phe Val Ser His Asp Phe
340 345 350

Arg Asp His Ala Lys Asn Ala Leu Leu Cys Arg Ser Val Arg Thr Val
355 360 365

Lys Gln Met Gln Val Ser Leu Ile Ser Lys Lys His Ser Arg Lys Ser
370 375 380

Ser Ser Tyr Ser Ser Ser Thr Thr Val Lys Thr Ser Tyr
385 390 395

<210> 7
<211> 425
<212> PRT
<213> Mus musculus

<220>
<223> Thrombin receptor

<400> 7
Met Gly Pro Arg Arg Leu Leu Leu Val Ala Ala Cys Phe Ser Leu Cys
1 5 10 15

Gly Phe Leu Leu Ser Ala Arg Thr Arg Ala Arg Arg Pro Glu Ser Lys
20 25 30

Ala Thr Asn Ala Thr Leu Asp Pro Arg Ser Phe Leu Leu Arg Asn Pro
35 40 45

Asn Asp Lys Tyr Glu Pro Phe Trp Glu Asp Glu Glu Lys Asn Glu Ser
50 55 60

Gly Leu Thr Glu Tyr Arg Leu Val Ser Ile Asn Lys Ser Ser Pro Leu
65 70 75 80

Gln Lys Gln Leu Pro Ala Phe Ile Ser Glu Asp Ala Ser Gly Tyr Leu
85 90 95

Thr Ser Ser Trp Leu Thr Leu Phe Val Pro Ser Val Tyr Thr Gly Val
100 105 110

Phe Val Val Ser Leu Pro Leu Asn Ile Met Ala Ile Val Val Phe Ile
115 120 125

Leu Lys Met Lys Val Lys Lys Pro Ala Val Val Tyr Met Leu His Leu
130 135 140

Ala Thr Ala Asp Val Leu Phe Val Ser Val Leu Pro Phe Lys Ile Ser
145 150 155 160

Tyr Tyr Phe Ser Gly Ser Asp Trp Gln Phe Gly Ser Glu Leu Cys Arg
165 170 175

Phe Val Thr Ala Ala Phe Tyr Cys Asn Met Tyr Ala Ser Ile Leu Leu
180 185 190

Met Thr Val Ile Ser Ile Asp Arg Phe Leu Ala Val Val Tyr Pro Met
 195 200 205
 Gln Ser Leu Ser Trp Arg Thr Leu Gly Arg Ala Ser Phe Thr Cys Leu
 210 215 220
 Ala Ile Trp Ala Leu Ala Ile Ala Gly Val Val Pro Leu Val Leu Lys
 225 230 235 240
 Glu Gln Thr Ile Gln Val Pro Gly Leu Asn Ile Thr Thr Cys His Asp
 245 250 255
 Val Leu Asn Glu Thr Leu Leu Glu Gly Tyr Tyr Ala Tyr Tyr Phe Ser
 260 265 270
 Ala Phe Ser Ala Val Phe Phe Val Pro Leu Ile Ile Ser Thr Val
 275 280 285
 Cys Tyr Val Ser Ile Ile Arg Cys Leu Ser Ser Ala Val Ala Asn
 290 295 300
 Arg Ser Lys Lys Ser Arg Ala Leu Phe Leu Ser Ala Ala Val Phe Cys
 305 310 315 320
 Ile Phe Ile Ile Cys Phe Gly Pro Thr Asn Val Leu Leu Ile Ala His
 325 330 335
 Tyr Ser Phe Leu Ser His Thr Ser Thr Glu Ala Ala Tyr Phe Ala
 340 345 350
 Tyr Leu Leu Cys Val Cys Val Ser Ser Ile Ser Ser Cys Ile Asp Pro
 355 360 365
 Leu Ile Tyr Tyr Tyr Ala Ser Ser Glu Cys Gln Arg Tyr Val Tyr Ser
 370 375 380
 Ile Leu Cys Cys Lys Glu Ser Ser Asp Pro Ser Ser Tyr Asn Ser Ser
 385 390 395 400
 Gly Gln Leu Met Ala Ser Lys Met Asp Thr Cys Ser Ser Asn Leu Asn
 405 410 415
 Asn Ser Ile Tyr Lys Lys Leu Leu Thr
 420 425

<210> 8
 <211> 7
 <212> PRT
 <213> Mus musculus

<220>
 <223> C140 receptor activation peptide

<400> 8
 Arg Asn Asn Ser Lys Gly Arg
 1 - 5

<210> 9
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 3-mercaptopropionic acid

<220>
<223> Description of Artificial Sequence: C140 receptor antagonist

<400> 9
Xaa Leu Leu Gly Lys
1 5

<210> 10
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 antagonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 3-mercaptopropionic acid

<400> 10
Xaa Leu Ile Gly Arg
1 5

<210> 11
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor antagonist

<220>
<221> VARIANT
<222> (1)..(2)
<223> Xaa at position 1 = 3-mercaptopropionic acid; Xaa at position 2 = cyclohexylalanine

<400> 11
Xaa Xaa Leu Lys Gly
1 5

<210> 12

<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor antagonist

<220>
<221> VARIANT
<222> (1)..(2)
<223> Xaa at position 1 = 3-mercaptopropionic acid; Xaa at position 2 = cyclohexylalanine

<400> 12
Xaa Xaa Ile Gly Arg
1 5

<210> 13
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor antagonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 3-mercaptopropionic acid

<400> 13
Xaa Leu Leu Gly Lys Lys
1 5

<210> 14
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor antagonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 3-mercaptopropionic acid

<400> 14
Xaa Leu Ile Gly Arg Lys
1 5

<210> 15
<211> 10

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor antagonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 3-mercaptopropionic acid

<400> 15
Xaa Leu Ile Gly Arg Lys Glu Thr Gln Pro
1 5 10

<210> 16
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor antagonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 3-mercaptopropionic acid

<400> 16
Xaa Leu Leu Gly Lys Lys Asp Gly Thr Ser
1 5 10

<210> 17
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor antagonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = (n-pentyl) 2-N-Leu

<400> 17
Xaa Ile Gly Arg Lys
1 5

<210> 18
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor antagonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = Me-N-(n-pentyl)

<400> 18
Xaa Leu Ile Gly Arg Lys
1 5

<210> 19
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor agonist/immunogen

<400> 19
Ser Lys Gly Arg Ser Leu Ile Gly Arg Leu Glu Thr
1 5 10

<210> 20
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor agonist/immunogen

<400> 20
Ile Ser Tyr His Leu His Gly Asn Asn Trp Val Tyr Gly Glu Ala Leu
1 5 10 15

Cys

<210> 21
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor agonist/immunogen

<400> 21
Gln Thr Ile Tyr Ile Pro Ala Leu Asn Ile Thr Thr Cys His Asp Val
1 5 10 15

Leu Pro Glu Glu Val Leu Val Gly Asp Met Phe Asn Tyr Phe Leu
20 25 30

<210> 22
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist/immunogen

<400> 22
His Tyr Phe Leu Ile Lys Thr Gln Arg Gln Ser His Val Tyr Ala
1 5 10 15

<210> 23
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 23
Ser Leu Ile Gly Arg Leu
1 5

<210> 24
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 24
Ser Leu Ile Gly Arg Ala
1 5

<210> 25
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 25
Ser Leu Ile Gly Ala Leu
1 5

<210> 26
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 26
Ser Leu Ile Ala Arg Leu
1 5

<210> 27
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 27
Ser Leu Ala Gly Arg Leu
1 5

<210> 28
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 28
Ser Ala Ile Gly Arg Leu
1 5

<210> 29
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 29
Ala Leu Ile Gly Arg Leu
1 5

<210> 30
<211> 6

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 30
Ser Phe Phe Leu Arg Trp
1 5

<210> 31
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 31
Arg Asn Asn Ser Ser Lys Gly Arg
1 5

<210> 32
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 32
Ser Leu Ile Gly Arg Leu Glu Thr Gln Pro Pro Ile Thr
1 5 10

<210> 33
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 33
Ser Leu Ile Gly Arg Leu Glu Thr Gln Pro Pro Ile
1 5 10

<210> 34
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 34
Ser Leu Ile Gly Arg Leu Glu Thr Gln Pro Pro
1 5 10

<210> 35
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 35
Ser Leu Ile Gly Arg Leu Glu Thr Gln Pro
1 5 10

<210> 36
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 36
Ser Leu Ile Gly Arg Leu Glu Thr Gln
1 5

<210> 37
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 agonist

<400> 37
Ser Leu Ile Gly Arg Leu Glu Thr
1 5

<210> 38
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 38
Ser Leu Ile Gly Arg Leu Glu
1 5

<210> 39
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 39
Ser Leu Ile Gly Arg Leu
1 5

<210> 40
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 40
Ser Leu Ile Gly Arg
1 5

<210> 41
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 41
Ser Leu Leu Gly Lys Val Asp Gly Thr Ser His Val Thr
1 5 10

<210> 42
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 42
Ser Leu Leu Gly Lys Val Asp Gly Thr Ser His Val
1 5 10

<210> 43
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 43
Ser Leu Leu Gly Lys Val Asp Gly Thr Ser His
1 5 10

<210> 44
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 44
Ser Leu Leu Gly Lys Val Asp Gly Thr Ser
1 5 10

<210> 45
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 45
Ser Leu Leu Gly Lys Val Asp Gly Thr
1 5

<210> 46
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 46
Ser Leu Leu Gly Lys Val Asp Gly
1 5

<210> 47

<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 47
Ser Leu Leu Gly Lys Val Asp
1 5

<210> 48
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 48
Ser Leu Leu Gly Lys Val
1 5

<210> 49
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 49
Ser Leu Leu Gly Lys
1 5

<210> 50
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<220>
<221> VARIANT
<222> (2)
<223> Xaa at position 2 = cyclohexylalanine (Cha)

<400> 50
Ser Xaa Ile Gly Arg
1 5

<210> 51
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<220>
<221> VARIANT
<222> (2)
<223> Xaa at position 2 = cyclohexylalanine (Cha)

<400> 51
Ser Xaa Leu Gly Lys
1 5

<210> 52
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 2,3-diamino propionic acid
(2,3-diaP)

<400> 52
Xaa Ile Gly Arg
1

<210> 53
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 2,3-diamino propionic acid
(2,3-diaP)

<400> 53
Xaa Leu Leu Gly Lys
1 5

<210> 54
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 54
Ser Leu Leu Gly Lys Arg
1 5

<210> 55
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<400> 55
Ser Leu Ile Gly Arg Arg
1 5

<210> 56
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<220>
<221> VARIANT
<222> (2)
<223> Xaa at position 2= cyclohexylalanine (Cha)

<400> 56
Ser Xaa Leu Gly Lys Lys
1 5

<210> 57
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 agonist
receptor

<220>
<221> VARIANT

<222> (2)
<223> Xaa at position 2 = cyclohexylalanine (Cha)

<400> 57
Ser Xaa Ile Gly Arg Lys
1 5

<210> 58
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 2,3-diamino propionic acid
(2,3-diaP)

<400> 58
Xaa Leu Ile Gly Arg Lys
1 5

<210> 59
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C140 receptor
agonist

<220>
<221> VARIANT
<222> (1)
<223> Xaa at position 1 = 2,3-diamino propionic acid
(2,3-diaP)

<400> 59
Xaa Leu Leu Gly Lys Lys
1 5

<210> 60
<211> 2732
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (73)...(1269)
<223> C140 receptor, cDNA and deduced protein sequences

<400> 60

ccctgtgctc agagtagggc tccgagttc gaaccactgg tggcggattg cccgcccc 60
 ccacgtccgg gg atg cga agt ctc agc ctg gcg tgg ctg ctg gga ggt atc 111
 Met Arg Ser Leu Ser Leu Ala Trp Leu Leu Gly Gly Ile
 1 5 10

 acc ctt ctg gcg gcc tcg gtc tcc tgc agc cg^g acc gag aac ctt gca 159
 Thr Leu Leu Ala Ala Ser Val Ser Cys Ser Arg Thr Glu Asn Leu Ala
 15 20 25

 ccg gga [cg^c aac aac agt aaa gga aga] agt ctt att ggc aga tta gaa 207
 Pro Gly [Arg Asn Asn Ser Lys Gly Arg] Ser Leu Ile Gly Arg Leu Glu
 30 35 40 45

 acc cag cct cca atc act ggg aaa ggg gtt ccg gta gaa cca ggc ttt 255
 Thr Gln Pro Pro Ile Thr Gly Lys Gly Val Pro Val Glu Pro Gly Phe
 50 55 60

 tcc atc gat gag ttc tct gcg tcc atc ctc acc ggg aag ctg acc acg 303
 Ser Ile Asp Glu Phe Ser Ala Ser Ile Leu Thr Gly Lys Leu Thr Thr
 65 70 75

 gtc ttt ctt ccg gtc gtc tac att att gtg ttt gtg att ggt ttg ccc 351
 Val Phe Leu Pro Val Val Tyr Ile Val Phe Val Ile Gly Leu Pro
 80 85 90

 agt aat ggc atg gcc ctc tgg atc ttc ctt ttc cga acg aag aag aaa 399
 Ser Asn Gly Met Ala Leu Trp Ile Phe Leu Phe Arg Thr Lys Lys Lys
 95 100 105

 cac ccc gcc gtg att tac atg gcc aac ctg gcc ttg gcc gac ctc ctc 447
 His Pro Ala Val Ile Tyr Met Ala Asn Leu Ala Leu Ala Asp Leu Leu
 110 115 120 125

 tct gtc atc tgg ttc ccc ctg aag atc tcc tac cac cta cat ggc aac 495
 Ser Val Ile Trp Phe Pro Leu Lys Ile Ser Tyr His Leu His Gly Asn
 130 135 140

 aac tgg gtc tac ggg gag gcc ctg tgc aag gtg ctc att ggc ttt ttc 543
 Asn Trp Val Tyr Gly Glu Ala Leu Cys Lys Val Leu Ile Gly Phe Phe
 145 150 155

 tat ggt aac atg tat tgc tcc atc ctc ttc atg acc tgc ctc agc gtg 591
 Tyr Gly Asn Met Tyr Cys Ser Ile Leu Phe Met Thr Cys Leu Ser Val
 160 165 170

 cag agg tac tgg gtg atc gtg aac ccc atg gga cac ccc agg aag aag 639
 Gln Arg Tyr Trp Val Ile Val Asn Pro Met Gly His Pro Arg Lys Lys
 175 180 185

 gca aac atc gcc gtt ggc gtc tcc ttg gca atc tgg ctc ctg att tt^g 687
 Ala Asn Ile Ala Val Gly Val Ser Leu Ala Ile Trp Leu Leu Ile Phe
 190 195 200 205

 ctg gtc acc atc cct ttg tat gtc atg aag cag acc atc tac att cca 735
 Leu Val Thr Ile Pro Leu Tyr Val Met Lys Gln Thr Ile Tyr Ile Pro
 210 215 220

 gca ttg aac atc acc acc tgt cac gat gtg ctg cct gag gag gta ttg 783

Ala Leu Asn Ile Thr Thr Cys His Asp Val Leu Pro Glu Glu Val Leu			
225	230	235	
gtg ggg gac atg ttc aat tac ttc ctc tca ctg gcc att gga gtc ttc	831		
Val Gly Asp Met Phe Asn Tyr Phe Leu Ser Leu Ala Ile Gly Val Phe			
240	245	250	
ctg ttc ccg gcc ctc ctt act gca tct gcc tac gtg ctc atg atc aag	879		
Leu Phe Pro Ala Leu Leu Thr Ala Ser Ala Tyr Val Leu Met Ile Lys			
255	260	265	
acg ctc cgc tct tct gct atg gat gaa cac tca gag aag aaa agg cag	927		
Thr Leu Arg Ser Ser Ala Met Asp Glu His Ser Glu Lys Lys Arg Gln			
270	275	280	285
agg gct atc cga ctc atc atc acc gtg ctg gcc atg tac ttc atc tgc	975		
Arg Ala Ile Arg Leu Ile Ile Thr Val Leu Ala Met Tyr Phe Ile Cys			
290	295	300	
ttt gct cct agc aac ctt ctc gta gtg cat tat ttc cta atc aaa	1023		
Phe Ala Pro Ser Asn Leu Leu Leu Val Val His Tyr Phe Leu Ile Lys			
305	310	315	
acc cag agg cag agc cac gtc tac gcc ctc tac ctt gtc gcc ctc tgc	1071		
Thr Gln Arg Gln Ser His Val Tyr Ala Leu Tyr Leu Val Ala Leu Cys			
320	325	330	
ctg tcg acc ctc aac agc tgc ata gac ccc ttt gtc tat tac ttt gtc	1119		
Leu Ser Thr Leu Asn Ser Cys Ile Asp Pro Phe Val Tyr Tyr Phe Val			
335	340	345	
tca aaa gat ttc agg gat cac gcc aga aac gcg ctc ctc tgc cga agt	1167		
Ser Lys Asp Phe Arg Asp His Ala Arg Asn Ala Leu Leu Cys Arg Ser			
350	355	360	365
gtc cgc act gtg aat cgc atg caa atc tcg ctc agc tcc aac aag ttc	1215		
Val Arg Thr Val Asn Arg Met Gln Ile Ser Leu Ser Ser Asn Lys Phe			
370	375	380	
tcc agg aag tcc ggc tcc tac tct tca agc tca acc agt gtt aaa acc	1263		
Ser Arg Lys Ser Gly Ser Tyr Ser Ser Ser Thr Ser Val Lys Thr			
385	390	395	
tcc tac tgagctgtac ctgaggatgt caagcctgct tgatgatgat gatgatgatg	1319		
Ser Tyr			
gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gcacccgtgt gtgagtgctgt	1379		
ggtagggata caccaacatg gatggggctg tcatttctta tccaagctgt ctgtctctgc	1439		
accaatcaca agcatgcagc tctccccagg attgacagaa gcctcctcct ttgcatgaga	1499		
acagtcttcc actctgtatga aaagcatcag tatcagaaac taaaacgaac tgagaggagc	1559		
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acaaaaacta cacctggcaa gaaggctaa actctctgaa atgcttccct tttccatctg	1679		
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 aaccggctaa cagtggcctt gctggacaat aggattcaga tggctggagt tacattctca 1859
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 aataaaattt ttggttttttt ggtttttaa cttgggccaatcataaaatac tgcttaggtt 2279
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 ttactgttagt gtcagtttc cctcatcctc gatcatagtc cttccgtga agcagggccc 2399
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<210> 61
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 35 40 45
 Pro Ile Thr Gly Lys Gly Val Pro Val Glu Pro Gly Phe Ser Ile Asp
 50 55 60
 Glu Phe Ser Ala Ser Ile Leu Thr Gly Lys Leu Thr Thr Val Phe Leu
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 Pro Val Val Tyr Ile Ile Val Phe Val Ile Gly Leu Pro Ser Asn Gly
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Met Ala Leu Trp Ile Phe Leu Phe Arg Thr Lys Lys Lys His Pro Ala
 100 105 110
 Val Ile Tyr Met Ala Asn Leu Ala Leu Ala Asp Leu Leu Ser Val Ile
 115 120 125
 Trp Phe Pro Leu Lys Ile Ser Tyr His Leu His Gly Asn Asn Trp Val
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 Tyr Gly Glu Ala Leu Cys Lys Val Leu Ile Gly Phe Phe Tyr Gly Asn
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 Met Tyr Cys Ser Ile Leu Phe Met Thr Cys Leu Ser Val Gln Arg Tyr
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 Trp Val Ile Val Asn Pro Met Gly His Pro Arg Lys Lys Ala Asn Ile
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 Ala Val Gly Val Ser Leu Ala Ile Trp Leu Leu Ile Phe Leu Val Thr
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 Ile Pro Leu Tyr Val Met Lys Gln Thr Ile Tyr Ile Pro Ala Leu Asn
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 Ile Thr Thr Cys His Asp Val Leu Pro Glu Glu Val Leu Val Gly Asp
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 245 250 255
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 260 265 270
 Ser Ser Ala Met Asp Glu His Ser Glu Lys Lys Arg Gln Arg Ala Ile
 275 280 285
 Arg Leu Ile Ile Thr Val Leu Ala Met Tyr Phe Ile Cys Phe Ala Pro
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 Ser Asn Leu Leu Leu Val Val His Tyr Phe Leu Ile Lys Thr Gln Arg
 305 310 315 320
 Gln Ser His Val Tyr Ala Leu Tyr Leu Val Ala Leu Cys Leu Ser Thr
 325 330 335
 Leu Asn Ser Cys Ile Asp Pro Phe Val Tyr Tyr Phe Val Ser Lys Asp
 340 345 350
 Phe Arg Asp His Ala Arg Asn Ala Leu Leu Cys Arg Ser Val Arg Thr
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Pro Ser Ala Ala Trp Leu Leu Gly Ala Ala Ile Leu Leu Ala Ala Ser
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Leu Ser Cys Ser Gly Thr Ile Gln Gly Thr Asn Arg Ser Ser Lys Gly
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Arg Ser Leu Ile Gly Lys Val Asp Gly Thr Ser His Val Thr Gly Lys
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Gly Val Thr Val Glu Thr Val Phe Ser Val Asp Glu Phe Ser Ala Ser
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Val Leu Ala Gly Lys Leu Thr Thr Val Phe Leu Pro Ile Val Tyr Thr
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Ile Val Phe Ala Val Gly Leu Pro Ser Asn Gly Met Ala Leu Trp Val
85 90 95

ttt ctt ttc cga act aag aag cac cct gct gtg att tac atg g^cc 394
Phe Leu Phe Arg Thr Lys Lys His Pro Ala Val Ile Tyr Met Ala
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Asn Leu Ala Leu Ala Asp Leu Leu Ser Val Ile Trp Phe Pro Leu Lys
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Ile Ala Tyr His Ile His Gly Asn Asn Trp Ile Tyr Gly Glu Ala Leu
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Cys Asn Val Leu Ile Gly Phe Phe Tyr [Gly] Asn Met Tyr Cys Ser Ile
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Leu Phe Met Thr Cys Leu Ser Val Gln Arg Tyr Trp Val Ile Val Asn
165 170 175

ccc atg ggg cac tcc agg aag aag gca aac att gcc att ggc atc tcc	634
Pro Met Gly His Ser Arg Lys Lys Ala Asn Ile Ala Ile Gly Ile Ser	
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ctg gca ata tgg ctg ctg act ctg ctg gtc acc atc cct ttg tat gtc	682
Leu Ala Ile Trp Leu Leu Thr Leu Leu Val Thr Ile Pro Leu Tyr Val	
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Val Lys Gln Thr Ile Phe Ile Pro Ala Leu Asn Ile Thr Thr Cys His	
215 220 225	
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Asp Val Leu Pro Glu Gln Leu Leu Val Gly Asp Met Phe Asn Tyr Phe	
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Leu Ser Leu Ala Ile Gly Val Phe Leu Phe Pro Ala Phe Leu Thr Ala	
245 250 255	
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Ser Ala Tyr Val Leu Met Ile Arg Met Leu Arg Ser Ser Ala Met Asp	
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Glu Asn Ser Glu Lys Lys Arg Lys Arg Ala Ile Lys Leu Ile Val Thr	
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Val Leu Gly Met Tyr Leu Ile Cys Phe Thr Pro Ser Asn Leu Leu Leu	
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310 315 320	
gcc ctg tac att gta gcc ctc tgc ctc tct acc ctt aac agc tgc atc	1066
Ala Leu Tyr Ile Val Ala Leu Cys Leu Ser Thr Leu Asn Ser Cys Ile	
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gac ccc ttt gtc tat tac ttt gtt tca cat gat ttc agg gat cat gca	1114
Asp Pro Phe Val Tyr Tyr Phe Val Ser His Asp Phe Arg Asp His Ala	
340 345 350 355	
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Lys Asn Ala Leu Leu Cys Arg Ser Val Arg Thr Val Lys Gln Met Gln	
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gta ccc ctc acc tca aag aaa cac tcc agg aaa tcc agc tct tac tct	1210
Val Pro Leu Thr Ser Lys Lys His Ser Arg Lys Ser Ser Tyr Ser	
375 380 385	
tca agt tca acc act gtt aag acc tcc tat tgagtttcc aggtcctcag	1260
Ser Ser Ser Thr Thr Val Lys Thr Ser Tyr	
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<210> 63
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<212> PRT
<213> Homo sapiens

<400> 63
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35 40 45
Thr Gly Lys Gly Val Thr Val Glu Thr Val Phe Ser Val Asp Glu Phe
50 55 60
Ser Ala Ser Val Leu Ala Gly Lys Leu Thr Thr Val Phe Leu Pro Ile
65 70 75 80
Val Tyr Thr Ile Val Phe Ala Val Gly Leu Pro Ser Asn Gly Met Ala
85 90 95
Leu Trp Val Phe Leu Phe Arg Thr Lys Lys Lys His Pro Ala Val Ile
100 105 110
Tyr Met Ala Asn Leu Ala Leu Asp Leu Leu Ser Val Ile Trp Phe
115 120 125
Pro Leu Lys Ile Ala Tyr His Ile His Gly Asn Asn Trp Ile Tyr Gly
130 135 140
Glu Ala Leu Cys Asn Val Leu Ile Gly Phe Phe Tyr Gly Asn Met Tyr
145 150 155 160
Cys Ser Ile Leu Phe Met Thr Cys Leu Ser Val Gln Arg Tyr Trp Val
165 170 175
Ile Val Asn Pro Met Gly His Ser Arg Lys Lys Ala Asn Ile Ala Ile
180 185 190
Gly Ile Ser Leu Ala Ile Trp Leu Leu Thr Leu Leu Val Thr Ile Pro
195 200 205
Leu Tyr Val Val Lys Gln Thr Ile Phe Ile Pro Ala Leu Asn Ile Thr
210 215 220
Thr Cys His Asp Val Leu Pro Glu Gln Leu Leu Val Gly Asp Met Phe
225 230 235 240
Asn Tyr Phe Leu Ser Leu Ala Ile Gly Val Phe Leu Phe Pro Ala Phe
245 250 255

Leu Thr Ala Ser Ala Tyr Val Leu Met Ile Arg Met Leu Arg Ser Ser
260 265 270

Ala Met Asp Glu Asn Ser Glu Lys Lys Arg Lys Arg Ala Ile Lys Leu
275 280 285

Ile Val Thr Val Leu Gly Met Tyr Leu Ile Cys Phe Thr Pro Ser Asn
290 295 300

Leu Leu Leu Val Val His Tyr Phe Leu Ile Lys Ser Gln Gly Gln Ser
305 310 315 320

His Val Tyr Ala Leu Tyr Ile Val Ala Leu Cys Leu Ser Thr Leu Asn
325 330 335

Ser Cys Ile Asp Pro Phe Val Tyr Tyr Phe Val Ser His Asp Phe Arg
340 345 350

Asp His Ala Lys Asn Ala Leu Leu Cys Arg Ser Val Arg Thr Val Lys
355 360 365

Gln Met Gln Val Pro Leu Thr Ser Lys Lys His Ser Arg Lys Ser Ser
370 375 380

Ser Tyr Ser Ser Ser Thr Thr Val Lys Thr Ser Tyr
385 390 395